

Serial No.: 10/800.425

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IN THE CLAIMS:

1. (Currently Amended) An undersea optical repeater, comprising:
 - a pressure vessel for use in an undersea environment, said pressure vessel having at least two cable receiving elements for respectively receiving ends of optical cables that each include an electrical conductor therein;
 - at least one optical amplifier located in the pressure vessel, said optical amplifier including at least one electrical component adapted to receive electrical power from the electrical conductors in the optical cables; and
 - a dielectric envelope surrounding the pressure vessel to provide a hermetic seal therewith, said envelope including a preformed dielectric sheath press-fitted around a central portion of the pressure vessel and a dielectric overmold surrounding at least end portions a portion of the pressure vessel.
2. (Currently Amended) The undersea optical repeater of claim 1 wherein said dielectric overmold surrounds the entire pressure vessel central portion of the pressure vessel houses the optical amplifier.
3. (Currently Amended) The undersea optical repeater of claim 1 wherein the first portion of the pressure vessel includes a cylindrical portion and the end portions include end caps coupled to opposing ends of the cylindrical portion.
4. (Currently Amended) The undersea optical repeater of claim 3 2 wherein the first portion of the pressure vessel includes a cylindrical portion and the end portions include end caps coupled to opposing ends of the cylindrical portion said dielectric overmold surrounds at least the end caps of the pressure vessel.

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5. (Cancelled)

6. (Cancelled)

7. (Original) The undersea optical repeater of claim 1 wherein said dielectric overmold is a thermoplastic material.

8. (Currently Amended) The undersea optical repeater of claim 6-4 wherein said dielectric overmold is a thermoplastic material.

9. (Original) The undersea optical repeater of claim 7 wherein said thermoplastic material is polyethylene.

10. (Original) The undersea optical repeater of claim 8 wherein said thermoplastic material is polyethylene.

11. (Original) The undersea optical repeater of claim 9 wherein said preformed dielectric sheath is a polyethylene sheath.

12. (Original) The undersea optical repeater of claim 1 wherein said pressure vessel is a pressure vessel adapted for an undersea optical fiber cable joint.

13. (Original) The undersea optical repeater of claim 1 wherein said pressure vessel is a pressure vessel adapted for a universal cable joint for jointing optical cables having different configurations.

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14. (Original) The undersea optical repeater of claim 1 wherein at least a portion of the pressure vessel is adapted to be in electrical contact with the electrical conductors in the optical cables.

15. (Original) The undersea optical cable of claim 3 wherein said end caps are each adapted to be in electrical contact with one of the electrical conductors in the optical cables.

16. (New) An undersea optical repeater, comprising:

a pressure vessel for use in an undersea environment, said pressure vessel having at least two cable receiving elements for respectively receiving ends of optical cables that each include an electrical conductor therein, said pressure vessel further including a portion intermediate to the cable receiving elements in which at least a portion of optical or electrical components associated with an optical amplifier are located, said optical amplifier including at least one electrical component adapted to receive electrical power from the electrical conductors in the optical cables; and

a dielectric envelope surrounding the pressure vessel to provide a hermetic seal therewith, said dielectric envelope including a dielectric overmold surrounding the cable receiving elements but not the portion intermediate to the cable receiving elements.

17. (New) The undersea optical repeater of claim 16 wherein the dielectric envelope further comprises a preformed dielectric sheath press-fitted around the portion intermediate to the cable receiving elements.